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VOR

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AMERICAN DYESTUFF REPORTER

A Weekly Publication devoted to

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"Circulated Everywhere Dyestuffs Are Used"

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"THE NEXT WAR" AND THE DYE SITUATION

British Chemist Warns Against Renewal of Germany's World Domination as Dye Industry Here Seeks Protection

A LITTLE more comprehensive than usual in its survey of the relative positions of Germany, England and the United States with respect not alone to the dye industry but chemical industries in general, as well as "the next war," is the recent article by Robert Mountsier, a British chemist, in *The Annalist*, published by the New York Times Company. We present Mr. Mountsier's article this week in the belief that it should go on record with the trade, along with the Choate speech, General Mitchell's testimony, the Lefebure article and others, as a valuable addition to the literature bearing upon the very pressing case of the Dye bill in this country. Again the military note, quite properly, is dominant, and The REPORTER was influenced in no small degree in its decision to reproduce the article by reason of this; for it is our increasingly firm conviction that of all the arguments in favor of the adoption of licensing, the absolute necessity of complete preparedness in modern warfare is the most important and has the best chance of being understood, and hence, that only by properly emphasizing it, vigorously and persistently, can justice to the dye and the textile industries, and the country at large, be obtained from Congress. We also feel that you will be interested in reading of the duel between Germany and England for control of the alizarine situation as far back as 1869, of the methods used by the former to drive the British manufacturing company out of business, and of how the Government-aided Germans, beaten at their own game, managed nevertheless by adroit maneuvering to bring about a shortage of alizarine and other dyes and fine chemicals in England at the time the war broke out.

The article follows:

In the industrial warfare being waged between the great producing nations the chief struggle centers around the control of key industries, among the most important of which are the closely related dyestuff and chemical industries. In England and the United States these

industries, born of the war, are fighting for life; in Germany, for world domination.

Recently the British Parliament passed a bill controlling the importation of dyes, but only after the dyestuff industry had been disorganized by the extensive dumping of German dyes in the United Kingdom, and the chemical interests of England are demanding a similar bill for their protection. To protect the American dyestuff industry and make possible its further growth there is now before Congress a bill providing for control of the importation of dyes from foreign countries under a license system. By every means within their power the Germans are fighting to regain as far as possible the world-wide control of dyes and chemicals that was theirs before the war.

With hardly an industry in this country that is not dependent on dyestuffs and chemicals to a greater or less degree, special attention is being paid to these industries, but frequent references abroad to "the next war" and to "national security" in connection with them furnish additional reasons why European developments and points of view should receive general consideration in the United States.

Ignoring the League of Nations, the German manufacturer rarely fails to mention "the next war" when he is discussing his plans for the future. He has long known that the country which possesses highly developed dyestuff and chemical industries has in its factories potential arsenals for the manufacture of offensive and defensive weapons of war. The World War not only proved that he was correct, but it brought to the fore the importance of these industries in the manufacture of poison gases as an instrument of warfare.

Europe's Views

Unhampered by any anti-trust laws, the concerns belonging to the German dyestuffs merger voted at a recent meeting to extend for a long period the existing agreements, which regulate production, prices and sales at home and abroad. In giving reasons for this step the Board of Directors in their statement called attention to the fact that the dyestuff industry in other countries, especially the United States, had made enormous progress during the war and threatened to drive Germany from American and other export markets. In the face of this new and powerful competition, said the directors, it was of the utmost importance that German manufacturers should close their ranks and by concentration and co-ordination of effort consolidate the position of the German industry. In order to place the contemplated extension of nitrate production on a secure basis, the directors decided to take over from the Badische Anilin und Sodafabrik, the synthetic ammonia plants at Oppau and Leuna, the new company to be capitalized at 500,000,000 marks and to be held by the firms comprising the Interessen Gemeinschaft.

The English consider their new dye industry vital to the empire, not only as a key industry, with organic research resulting in the development of new industries, but because it gives national security as a guarantee of peace and is of political importance. Both the British and French have learned by experience how costly the German monopoly of dyestuffs could be both in peace and in war. Shortly after the armistice the Germans used their predominance in the supply of dyes for political bargaining when the lack of dyes in Alsace became a serious problem to the French. The war development of the dye industry in England saved the British from similar embarrassment during the Peace Conference.

However, when the famous Sankey judgment, handed down in December, 1919, declared illegal the method of prohibiting importations by order in council, the great dye establishments at Huddersfield and Blackley, which had previously been brought together under a unified control, with the British Government represented, were hard hit by the unimpeded flow of German dyes and chemicals into the United Kingdom.

Favored by the greatly depreciated value of the mark and helped by im-

proved fuel and labor conditions, the German manufacturers flooded England with dyestuffs last year, determined, as they were, to regain pre-war domination in this market. In November it was estimated that Liverpool warehouses alone held German dyestuffs of a total value of £4,500,000. And the annual value of the British dye trade is only £2,000,000.

In the debate on the Dye Supplies bill in Parliament it was argued that if protection were not granted the industry the danger lay not in the loss of this annual value to the country, but in the loss of plant, machinery and organic chemists and in the domination of the textile trade, valued at £240,000,000 a year, by the Germans through their control and manipulation of dye supplies and prices. In discussing the bill Mr. Asquith contended that the success of the German manufacturers was due solely to want of enterprise and to apathy on the part of the English manufacturers. On the other hand, supporters of the bill asserted that, to a great extent, the German monopoly was due to direct assistance for research from the Government and to the protection which the German industry had in its own domestic markets.

How Germany Works

The history of alizarine in England and Germany provides a striking example of German monopolistic methods. The practical system for the manufacture of alizarine, which is used in dyeing fabrics various shades of red, was patented almost simultaneously in England and Germany in the year 1869. The English patentee was Perkin, and the Badische Company became the owners of the German patents. Both patentees exchanged licenses, so that Perkin obtained a monopoly for the manufacture of alizarine in Great Britain. In 1873 more than twice as much of the dye was manufactured in Germany as was produced by Perkin, and a few years later the Germans completely dominated the supply. This was due to the commercial enterprise of the German manufacturers rather than to their superiority in science or large-scale production. By sending representatives abroad and establishing agencies all over the world the Germans had, by 1881, got so great a hold on the market that they joined forces and formed the first Alizarine Convention for the express purpose of raising prices. As a result the Germans cleared $5,000,000 on this dye alone in one year.

The next year, 1882, which was the year before the expiration of the patent, the German manufacturers of alizarine issued a circular in which the British consumers were informed that their supplies of the dye would be cut off unless they renewed their contracts at a new and increased price for a period of twelve months after the expiration of the patent in 1883. Since the price advance was highly unreasonable, the Scotch turkey red dyers replied to this threatening circular by going on short time to conserve their stocks and formed a co-operative organization, the British Alizarine Company, to meet their needs for this dye. As a conse-

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Union Colors for Mixed Goods
Amacid Colors for Dress Goods

FOR MEN'S WEAR

Amacid Chrome Colors
Alizarine Navy Blue
Alizarine Chrome Red
Alizarine Yellow
Alizarine Brown

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Works: Nyack, N. Y.
Offices:
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Danville, Va.
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quence the first Alizarine Convention came to an end in 1885 and prices reached a record low level. But the extraordinary profits made by the German dye industry through the alizarine monopoly enabled them to write off the cost of their works, to reconstruct them with large laboratories and to develop them with skilled research chemists.

The formation of the British Alizarine Company saved the Scotch turkey red dyers. Failing to put this company out of business, the Germans finally, in 1900, succeeded in making a convention that included the British company. This convention guaranteed to the British organization the sale of a certain quantity of alizarine at a fixed price. This quantity turned out to be totally inadequate for the needs of the United Kingdom and colonies, and, when the war broke out, there was consequently an acute shortage of alizarine.

Similar shortages were found in all other dyestuffs and practically all chemical supplies. During the first years of the war the British Government was faced with tremendous problems in attempting to provide sufficient quantities of dyes for textiles and to produce sufficient high explosives to feed the guns of the army and navy.

Of such importance is the British dye industry now considered for national defense that two Governments and Parliaments approved the policy "that the importation of all foreign dyestuffs shall be controlled by a system of licenses for not less than ten years after the war, in order to safeguard this industry against the great efforts which the German firms are certain to make after the war to destroy all we have accomplished during the war and to make this industry again subservient to Germany." The new Dye Supplies act prohibits, during the next ten years, the importation of all synthetic dyestuffs and coloring matters, and all organic intermediate products used in their manufacture, but the act does not apply to goods imported for exportation after transit in the United Kingdom or by way of transhipment.

A Threat to World Peace

The British War Office has pointed out the fundamental part played by the German dyestuff industry in keeping the German army in the field. Every toxic substance used in the field by the Germans during the war, with one unimportant exception, was made by the German dyestuff trust, the Interessen Gemeinschaft. These substances were made by the Interessen Gemeinschaft in plants suitable for the manufacture of aniline dyes and of intermediate products. The various companies forming the trust contributed the following to the chemical warfare organization of the German army:

1. Great flexible plants suitable for making almost any organic substance on a large scale at short notice;

2. A highly skilled personnel, capable of successfully conducting the large scale manufacture of complicated organic substances;

3. A large research staff, experienced in making laboratory process suitable for technical scale work.

In a statement issued by the Association of British Chemical Manufacturers it is asserted that the peace of the world will be threatened if the chemical industry in Great Britain is again reduced to its pre-war dependence on Germany for fine chemical production. "The development of chemical warfare and the growing importance of chemistry in abating disease especially make the organic chemical industry of vital importance," says the statement. "This aspect of the British fine chemical industry cannot be too much emphasized. Without such an industry we are dependent upon foreign countries for the following:

"Analytical reagents with which to test steel and other metals and materials used in manufacturing shells, guns, airplanes and other munitions of war;

"Synthetic organic drugs—anesthetics, hypnotics, antipyretics, antiseptics and venereal remedies;

"The pure chemical substances required by our universities and other institutions in their research and teaching laboratories;

"The utilization of the by-products in the industry which, otherwise, are wasted but which can be elaborated in the fine chemical industry into countless products, such as drugs, perfumes and photographic chemicals, giving employment to thousands of persons."

Among chemicals of German origin being offered in England at the cost of production or less are salicylic acid, aspirin, bromides, acetanilide, saccharin, atrophine, benzoic acid and benzoates. Already the production of phenacetin is being abandoned in England because of foreign imports. With the chemical industry being disorganized the British Government has promised it protection through a general bill dealing with the key industries.

The first chemical that came into prominence in England during the war was anhydrous sulphuric acid. The total pre-war demand for this acid was 500 tons a week, whereas German production was at least 10,000 tons weekly. As soon as the English found it necessary to manufacture nitroglycerine, guncotton and T. N. T. in large quantities they were greatly handicapped by the lack of sufficiently large plant. There was also lack of plant for producing chlorine, hydrogen and ammonia. In 1913 the Germans manu factured 100,000 tons of ammonia from atmospheric nitrogen at a cost of about $25 a ton, an din 1914 the whole of it was placed on the European market at more than $50 a ton. With their stocks of sodium nitrate what they were, the Germans could not have continued the war for more than two years had it not been for their development of the process of fixing atmospheric nitrogen in the form of ammonia.

"If we cannot produce a counter," said Dr. Herbert Levinstein, the English chemist, in discussing the need of protection for the British chemical industry, "the next war will certainly be a chemical war, and the results will be extraordinarily quick and decisive. Why was the last war in its later stages a chemical war? After the first battle of the Marne the Germans selected chemistry as their most likely means of effecting a surprise, because they were the sole belligerent possessing a large dyestuffs industry. Chemical warfare only failed to bring them a decision partly because they did not believe in their own weapon, and therefore were not able to follow up the results obtained —e. g., the use of chlorine in the second battle of Ypres—and partly because they used their products on too narrow a front to secure a strategic result from the initial surprise—e. g., the use of mustard gas.

"All the belligerents would have used chemical means to effect their military objects on a more stupendous scale than was already the case in 1918 had the war dragged on to a further spring campaign. Already at the end of 1918 70 per cent of the casualties were caused by gas. So long as there is no counter to the rapid production of toxic substances in Germany, the world is not safe; the

(*Continued on page* 12.)

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46 Murray Street, New York City

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A. P. HOWES, President
LAURANCE T. CLARK, Editor

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"NOTHING ELSE WILL DO"

Those of the British who are interested—and interest appears to assay higher per ton of British than per similar quantity of Americans—in seeing England make herself completely independent of all foreign powers as regards anything in the way of chemicals having remotely to do with war or with the all-important British textile industries, are wisely meditating a "Key Industries Bill" as a concomitant of the Dyestuffs Import Regulation Act, the design being to fill up the remaining chinks in the fortifications built around the heart of British defenses. And, according to press reports, this move has stirred up the original opponents of the Dyestuffs Act into a fine frenzy of outraged dignity and punctured self-esteem.

There is nothing more serious in their outbursts, either to the English or to supporters of licensing in this country, than the fact that a little group of hide-bound reactionaries and ancestor-worshippers is in the process of painfully awakening to the—to them—startling and annoying truth that "the world do move."

However, sentiment among this group crystallized recently at a meeting of the "Eighty Club" of Manchester, which has appointed a committee to "look into" the British dye industry. This committee is soon to make a report, and during the course of some remarks describing the reasons for appointing it Major Barnes, M.P., declared that one of the things which had clearly been shown by the investigation was the fact that certain interests which, through the circumstances of the war, had been engaged very profitably in that particular industry, had formed the intention of maintaining their advantageous position of the war in the aftertime of peace. The Major stated that the Key Industries bill was going to pursue the policy of the Dyes bill toward a great many other things; and, reverting to tactical terms, he added that, after comparing the present circumstances with those of fifty years ago, he considered that the old methods represented the frank frontal attack on free trade, but that now the methods had changed and an attempt was being made to turn the position by a flank attack. Then he waxed sarcastic:

"Not that they (the dye makers) wish to make money out of it," he snorted. "They never dream about that! But with the next war in view they are prepared to provide the necessary poison-gas plants. There is really no national interest in it at all. It is purely a question of private interest."

Without our going over the Major's line of reasoning point by point, it strikingly shows to what extent the tariff question can gain a hold on its victims when assimilated in habit-forming quantities. How much that sounds like home, where there are also some who have not yet become aware of the fact that the Lincoln administration—unfortunately—ended some years ago, and that the munitions of to-day in no respect resemble those used during the Civil War!

O. B. Hopkins, the statistician, agrees with the Major—in some things. In an absorbing article in the *Journal of Industrial and Engineering Chemistry*, he considers that there is every reason to suppose that the British Dyestuffs Act will serve, as its opponents charge, as the entering wedge in opening the way to protec-

tion in some form for other "key" industries.

"In particular," he opines, "the chemical manufacturers seem to be on solid ground in urging that if the dye industry is to be saved, it will be necessary to support also the closely allied branches engaged in the manufacture of by-products, which will insure profits from the dyes themselves. The industry is hopeful that the anti-dumping bill (the Key Industries bill) promised in the near future will provide for the control desired for certain other fine chemicals. It is an interesting fact that English manufacturers are not asking for protection in the shape of duties, but are united in their demand for license control."

Hear what Mr. Hopkins says about Germany's movements just after the Sankey decision of December, 1919:

"Following this decision, German agents began to take orders at prices the English manufacturers could not meet. Although the actual importation of dyes based on these orders was not extraordinarily heavy, it soon became evident that German manufacturers could undermine the English industry unless the Government took steps to prevent it. The consequent agitation finally led to the passage of the Dyestuffs Import Regulation Act of 1920, which provided for licensing imports without the imposition of a duty. . . . The passage of such an act in England has a significance that should be appreciated by all Americans who are in any way concerned with or responsible for the future of the industry in this country."

That takes in pretty much all of us. Those who are not responsible for the dye industry's future are concerned with it. The butcher is concerned; so is the baker and the candlestick-maker, and so, likewise, is even former Senator Thomas, just as though that gentleman were not in

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any way connected with the textile industries of his native State! This is everybody's game, but that fact is not yet widely enough known to count with Congress, and it cannot become widely enough known to count before the Dye bill will again be up for consideration.

Therefore, you, and you—and you—all of you who *do* understand: Write *again* to your representatives, now, before real action starts under the Harding administration, and tell them to take two or three little lessons from recent events in England, the first and foremost being that licensing for essential key industries, under such circumstances as our dye industry is facing, is absolutely necessary, certain, sound and safe; that the license scheme's real connection with the tariff lies chiefly in the fact that unless we adopt it we shall one day be unable to collect a tariff on anything from anybody, but instead may be privileged to divide our resources with some foreign power having no morals to speak of but plenty of poison gas and airplanes, and that every additional week of delay causes potential dye chemists and researchers to choose something more certain and profitable for a career—like plumbing.

Property owners can improve the appearance of homes and other buildings by demanding the use of from 30 to 50 per cent of zinc oxide in the paint pigment. This material increases the life of both exterior and interior coatings, insures lasting luster and prevents fading. Paint which includes the proper proportion of zinc in the pigment mixture better finds its way into the pores of the surface, and thus affords excellent protection against deterioration.

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DYES AND "THE NEXT WAR"

(*Continued from page 9.*)

menace of the Rhine factories lies not only in their geographical position but in the fact that they are unique. That the next war will begin as a chemical war is certain, because it is an arm which has now been tried, the principles of which are well known to soldiers."

Dr. Levinstein referred to the research work in chemical warfare that is being carried on in this country and to the measures being taken in this country to safeguard our dyestuff industry. As noted in *The Annalist* of January 3, the dyestuff industry in this country has been exporting, in addition to what it supplies to domestic consumers, as large a quantity of dyes as the country's total annual consumption amounted to before 1914. Developed during the war into a key industry of large proportions, it is now seeking protection both from an equally strong rival in England and from Germany's industry, which remains tremendously powerful in spite of defeat and the peace treaty. In 1918 Germany had 15,204 plants manufacturing chemicals and dyestuffs, and the following year 15,060, which showed a comparatively small decrease, ascribed mainly to the loss of Alsace-Lorraine. The number of plants in the United Kingdom in 1919 was 2,228, which during the first six months of 1920 employed 265,000 workers, about half the number of workers in the German plants. In 1919 the manufacturers of dyes in the United Kingdom spent about $500,000 on their research organizations.

Whatever the action of Congress regarding the importation of dyestuffs into this country, it is a matter of interest not merely to the manufactur-

ers of dyes and chemicals in the United States but to the American people as a whole, even though more particularly concerning those engaged in mining and agriculture, in the production of coal, oil and gas, and in the manufacture of products so diversified as textiles, building materials, drugs, medicines, explosives, rubber and leather products, fibers, matches, cellulose, glass, paints and paper.

COTTON CONVENTION DATES CHANGED

In order not to conflict with the annual convention of the Chamber of Commerce of the United States, which is to take place at Atlantic City on April 27, 28 and 29, it has been decided to change the date of the spring meeting of the National Association of Cotton Manufacturers to April 20, 21 and 22. In addition to James Thomson, chairman, and Morgan Butler, vice-chairman, the following compose the General Arrangements Committee: George B. Adams, Frederick A. Andres, Jr., Arthur Atwood, Jr., Edwin H. Baker, Daniel M. Bates, Colin C. Bell, Sydney Borden, Garrett D. Bowne, Jr., Charles B. Burleigh, Frank L. Carpenter, Charles H. Fish, Arnold C. Gardner, Walter M. Hastings, Frederic W. Howe, Earl S. Jenckes, Frank B. Kenney, Fred Lacey, James Lawrence, Jr., Ralph Lawson, Fred C. McDevitt, Kenneth Moller, Ernest L. Morrill, John Neild, George Nichols, George Francis Payne, John Porteous, Isaac T. Prosser, Raymond A. Rice, W. Randolph Sides, Albert G. Smith, Antonio Spencer, Wallace I. Stimpson and John E. Tobin.

FOREIGN DYES LICENSED BY W. T. B. FOR FEBRUARY IMPORT

Following is a complete list giving the types and quantities of dyestuffs for the importation of which into the United States licenses were granted by the War Trade Board during February. This tabulation is being issued by the American Dyes Institute, and it is announced that anyone interested in the manufacture of dyestuffs who has not received a copy may obtain one by application to that organization's headquarters, 320 Broadway, New York. It should be noted that, in addition to the colors listed here, there were items licensed for import from England as follows:

Dianol Fast Blue 2B.....200 lbs.
Durasol Acid Blue B.....300 lbs.

Designation of Dye	Germany (lbs.)	Switzerland (lbs.)
Acetyl Red BBX.....	10	..
Acid Alizarine Green 3G..	100	..
Acid Blue RBF.....	..	1,320
Acid Brown RN.....	..	1,000
Acid Cyanine BF.....	1,000	..
Acid Milling Black B.....	..	200
Acid Milling Black B—632	..	3,000
Acid Milling Red G—631..	..	1,250
Acid Violet 4BNS	..	1,200
Acid Violet 6BN.....	100	660
Acid Wool Blue RL—647.	..	2,700

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Algol Blue 3G Powder....	10	..
Algol Yellow WF Powder	10	..
Alizarine VI Extra Pure..	3,000	..
Alizarine Blue JR Powder	10	..
Alizarine Blue SAP.....	300	..
Alizarine Blue Sky	660	..
Alizarine Cyanine Green G Extra Powder	200	..
Alizarine Indigo G.....	1,000	..
Alizarine Orange SW Pdr.	10	..
Alizarine Red WS Powder	25	..
Alizarine Rubinol GW....	50	..
Alizarine Rubinol R	2,250	..
Amido Azo Black EG....	100	..
Amido Naphthol Red BB..	100	..
Anthraflavone GC Paste...	15	..
Autochrome Blue R Pat..	50	..
Azo Cyanine GR Extra ...	100	..
Azo Milling Yellow 5G....	100	..
Benzo Fast Scarlet 4BG...	200	..
Brilliant Acid Blue A.....	520	..
Brilliant Phosphine 5G 300%	..	440
Brilliant Sky Blue 5G.....	25	..
Carbogen B Pat.....	100	..
Chicago Red 3B—368.....	..	800
Chinoline Yellow	100	..
Chloramine Green G	..	1,200
Chlorantine Fast Light Blue 2GL	..	600
Chlorantine Fast Light Yellow 4GL	..	440
Chlorantine Fast Violet BL	..	330
Chlorantine Fast Violet 4BL	..	1,320
Chlorantine Orange TRL..	..	660
Chloramine Black Ex. Conc.	..	300
Chronal Blue CG—939.....	220	..
Chrome Azurol SXT—1046	..	500
Chrome Blue Brilliant G—1039	..	200
Chrome Brown RVV—899.	..	500
Chrome Fast Green G Conc.	..	660
Chrysoline—664	..	500
Ciba Blue 2B	..	70
Ciba Heliotrope B Powder	..	220
Ciba Red G	..	1,100
Ciba Red G—10%	..	990
Ciba Scarlet G Extra Pdr.	..	110
Ciba Violet B Paste.....	..	1,100
Ciba Violet R Paste.....	..	1,100
Cibanone Black B	..	2,420
Cibanone Brown V	..	1,100
Cibanone Orange R Pdr..	..	110
Columbia Violet R	100	..
Congo Orange R	300	..
Coriphosphine OX Extra..	660	..
Cupranile Brown G	..	1,100
Cupranile Brown R	..	1,100
Cutch Brown RR.....	..	150
Cyanine B	50	..
Diazo Brilliant Orange GR Extra	25	..
Diazo Brilliant Scarlet G Extra	5	..
Diazo Brown 3G	50	..
Diazo Fast Yellow 2G....	20	..
Diphenyl Brown 3GNC old —195	..	1,000
Diphenyl Chlorine Yellow FF Supra—287	..	1,500
Diphenyl Green KGW Supra —288	..	500
Direct Cutch Brown GR..	..	220
Direct Green B.....	..	300
Direct Red CES.....	100	..
Eclipse Brown BK—371...	..	200
Electric Blue (Color Lake)	524	..
Erio Chrome Azurol BX—1041	..	1,500
Erio Chrome Blue Black BC—926	..	3,000
Erio Floxine 2G.....	..	2,000
Erioglaucine A—501	..	1,500
Erio Rubine 2BC	..	5,000
Erio Violet BC—505	..	3,000
Erio Violet RL Supra.....	..	5,000
Erio Violet RL Supra—265	..	600
Fast Acid Green BB.....	100	..
Fast Acid Magenta G....	50	..
Fast Green Bluish.....	100	100
Fast Light Yellow 2G.....	..	2,000
Fast Light Yellow 3G.....	500	..
Flavazin L	200	..
Flavazin 5GL	100	..
Galleine JRG Paste—1021.	..	1,000
Gallamine Blue Paste—50.	..	500
Hansa Rubine	2,000	..
Hansa Yellow	1,000	..
Hydrozine Yellow LEG...	100	..
Indanthrene Blue GCD (Double)	400	..
Indanthrene Blue 3G	25	..
Indanthrene Claret B Extra	800	..
Indanthrene Red BN Ex..	1,000	..
Indanthrene Red BN Extra Paste	500	..
Indanthrene Red Violet		

Established 1895

B & L Bleachers Bluings

Manufactured by

Bosson & Lane

Works and Office, Atlantic, Mass.

RRN	1,000	..
Ink Blue BJTBNOO	500	..
Janus Red B	200	..
Janus Yellow G	300	..
Jasmine High Conc.—729.	..	500
Kerzengelb	11	..
Kiton Fast Violet 10B	..	3,500
Kiton Fast Yellow 3G	..	440
Kiton Pure Blue V	..	880
Lithol Orange	2,000	..
Methyl Lyone Blue	..	8,000
Methyl Silk Blue new—706	..	500
Methylene Green P	..	660
Methylene Green W—748	..	500
Mimosa Z Conc.—331	..	700
Naphthalene Blue B	200	..
Naphthalene Green V	100	..
Napthamine Direct Blue 2R	100	..
Napthogene Pure Blue 4B.	50	..
Naphthol AS (Samples Consumer)	4	..
New Patent Blue B—563	150	..
Night Blue	10	..
Orange Developer R	10	..
Orange IV Powder—522	..	500
Oxacid Blue 4B	100	..
Oxacid Red BB	100	..
Oxacid Red 6B	100	..
Oxy Acid Violet ROO	100	..
Palatine Light Yellow	200	..
Patent Marine Blue LE	200	..
Pat. Phosphine CG—300%.	..	2,200
Pat. Phosphine G—300%	100	2,200
Pat. Phosphine GG—300%.	..	1,100
Pat. Phosphine R—300%	..	1,100
Phosphine M—300%	..	1,210
Polyphenyl Orange RC	..	5,000
Polyphenyl O'nge RC—142	..	800
Pyrazol Orange G	..	60
Pyrogene Olive SG	..	880
Rhodamine B	..	660
Rhodamine 6G	50	..
Rhodamine 6G Extra	100	..
Scarlet Red, Medicinal	110	..
Setoglaucine—753	..	1,200
Tartrazine	..	4,840
Thional Yellow G	..	2,000
Trisulfon Brown GG	..	300
Trisulfon Violet B	..	150
Trisulfon Violet N	..	4,500
Turkish Red Lac	220	..
Union Black	..	3,000
Victoria Blue B—142.8	..	500
Victoria Blue BO	200	..
Wool Green SC—655	..	3,200
Xylene Blue VS	..	440
Xylene Light Yellow 2G	..	661
Xylene Yellow GG	..	3,800

ONLY TUPPENCE, NOW, TO DYE MILADY'S GOWN

E. B. Leary Says Cost Has Dropped 75 Per Cent—New Colorimeter Banishes Guesswork—Dyer of Future to Be Technically Trained Man

It costs very little to dye the modern scanty gown of womankind, according to Edward B. Leary, in his address Monday evening, March 7, before the Rochester Section of the American Chemical Society meeting in the Reynolds Laboratory of the University of Rochester.

Two decades ago when skirts were longer and sleeves more voluminous than they are now, a woman's dress could be dyed at a cost of about 5 cents.

"The actual cost of the Alice Blue dye in a modern dress," said Mr. Leary, "would be roughly figured at about one-fourth of that sum, namely two cents. This is due to the much smaller amount

I. Levinstein & Co.
Incorporated
281 Franklin Street
Boston, Mass.

British
and
American Dyes

DUROPRENE BASE

FOR VARNISHES AND INSULATING PURPOSES. FASTER TO ACIDS, ALKALIS, CHLORINE, ETC., THAN ANY KNOWN COMPETITIVE PRODUCT.

of material required nowadays to cover the same square surface."

Hope for the average man, or woman either, who may be concerned about the exact matching of dress samples, is held out by a new device for measuring color values which was described by the speaker.

The old method of matching certain colors in order to duplicate an order was to dye several samples of yarn skeins at the time the fabric concerned was being dyed. The handling of so many samples has now been made unnecessary by the use of a new type of colorimeter, which Mr. Leary demonstrated. By means of it, the shade and hue of a color are determined and are then recorded in accordance with a certain number, which corresponds to standard color filters and wedges used with an ordinary daylight lamp. Instead of depending upon the old "rule of thumb" method of trusting to the eye or to the often fanciful trade names of a color, the merchant may order fabrics which are of a hue expressed by an exact numerical ratio.

This progress in the judging of colors is another development of the growing American dye industry. Mr. Leary, who is the head of a large dye works in Rochester, said that in the past dyeing had been in the hands of mere craftsmen, who were without training. They had learned their trade, with its thousands of secrets, by serving an apprenticeship. Although many of the good features of the craft were handed down, so also were many faults and superstitions, which were due to the personality of the individual.

"This state of things," said Mr. Leary, "is rapidly changing, and the future will see the dyer not an apprentice-trained craftsman, but a technically trained dye chemist who is qualified to use the thousand and one delicate scientific instruments to match his shades and colors."

Mr. Leary has recently been appointed chairman of the Technical Research Committee selected by the National Society of Colors and Dyes. This organization has recently apportioned the sum of $5,000 to the Mellon Institute of Pittsburgh, for defraying the expenses of a research chemist who will confine his attention entirely to dyeing.

Further developments in the dye industry are to be announced at the forthcoming spring meeting of the American Chemical Society, to be held in Rochester the latter part of April. One of the features of this gathering of several thousand chemists will be the sessions of the Dye Division, at whih important inventions and discoveries in the color industry will be announced and discussed.

"SAVE MONEY; FOREGO BEER" WAS ADVICE TO DYER OF 1835

Drinking Before Breakfast Was Frowned Upon, and Swearing Strictly Taboo

The following notice to the work people of a Lancashire dye works has been found in the storeroom of an old mill in that section:

REGULATIONS ADOPTED
JANUARY, 1835

A Bank for Savings is establish'd for the benefit of the Workmen, whereby they may if so disposed secure to themselves, by weekly deposits a Fund for assistance in the time of need . . . . Interest at the rate of Four per Cent per Annum will be allow'd upon deposits which will be received in Sums of One Shilling or above . . . . This arrangement it is hoped will induce a more strict economy in the Money expended while at work for Beer, and which being thus saved may be turned to more profitable account.

One Man is appointed to go out Twice in the Morning, between the hours of Eleven and Twelve o'Clock also in the Afternoon between the hours of Four and Five o'Clock and in the Evening when overtime is made, between the hours of Seven and Eight o'Clock, who will provide the Beer required at each period.

Drinking before Breakfast, and Smoking during Working hours are both strictly prohibited.

The Men are not allowed to leave the premises except at Meal times without leave.

The Apprentices are forbidden on any pretence whatever to go out upon errands for the Men.

Scouring upon the Premises is not allowed. Any of the Men by obtaining leave may have a Job Dyed, but it must be given to the Foreman for that purpose . . . . This regulation is intended to prevent the mean practice of dyeing Jobs clandestinely, all of which if discovered will be Seized.

Every Man is expected to refrain from Quarrelling, Swearing or any noisy talking while at work, and in all matters and proceedings to conform to the general rules of decency and good order, thereby maintaining the respectable character for which the Men of this establishment have ever been distinguished, while at the same time they promote the interest of themselves and their employers.

Any Man upon the premises who is unwilling to conform to these regulations should immediately look out for employ elsewhere, a strict observance of them having been determined upon. —*Dyer & Calico Printer.*

LONGWORTH TO ATTEND A. C. S. SPRING MEETING

Dye Chemists Durged to Keep Up Membership and Present Papers

Close to the chemical center of the United States, and having 30,000 workers engaged in chemical and allied industries, the city of Rochester is preparing to welcome the hosts of the American Chemical Society which on April 25 begins a week's session in the Flower City.

The plans for the meeting indicates that fully 2,500 chemists will attend.

Nicholas Longworth, of the House of Representatives, and the author of the all-important Dye bill affecting the dye and chemical industries of the United States, will be present.

The gathering is especially significant as it is held in a city where there is situated a laboratory which with the co-operation of other laboratories and chemical plants throughout the country, is engaged in the successful production of rare chemicals which before the war were brought from Germany.

Rochester has also developed an optical glass industry which manufactures lenses for field glasses, telescopes and range finders. Before the outbreak of hostilities in Europe lenses were made in Germany almost exclusively, and to such an extent that many of the instruments of precision used by the American army and navy had lenses which had been made beyond the Rhine.

Official headquarters of the Society will be the Hotel Rochester, while the divisional and sectional meetings will be conducted at Mechanics Institute.

The American Chemical Society is the largest scientific body in the world and consists of 15,500 members, of whom more than 14,000 are in this country and the remainder distributed through every civilized country.

On Wednesday and Thursday, April 26 and 27, the Dye Division of the Society will assemble at Mechanics Institute, 55 South Plymouth Avenue, where all divisional meetings will be held. Scientific research is, has been and always will be the backbone of the Dye industry, and these semi-annual meetings afford the dye chemists an opportunity to participate in the presentation

CERTIFIED CHEMICAL CORP.
80 MAIDEN LANE. NEW YORK.
MANUFACTURERS OF
Safranine
A COLOR FOR SILK-WOOL-COTTON-PAPER ETC.

of scientific work in this field and to meet other chemists engaged in like work. For this reason The Reporter urges all to keep up their membership in this division, and all those who have not already joined, to do so at once and plan to present a paper at the Rochester meeting. Dues consist of $1 per year, and titles of prospective papers should be sent to the secretary of the Dye Division, American Chemical Society, R. Norris Shreve, 43 Fifth Avenue, New York.

Dye-a-Grams

Ed. Gross, of the Asco Corporation, is in Detroit again. There are very few mills in this section, but there is a play entitled "Up in Mabel's Room" at one of the theaters.

—o—

There was an old dyer named Dòyle,
Who fretted and fussed all the whoil.
The fireman just grinned;
He liked being chinned,
For lack of the steam for a boil!

—o—

What *has* become of Roosevelt's fifth cousin?

—o—

When the mills start up again, we've an idea there'll be a lot of sleeping sickness about the time the whistles blow!

—o—

All Will Hays has to do to become a popular P. G. is to find a way to eliminate "please remit" from the mails.

S. R. DAVID & COMPANY
INCORPORATED

Dyestuffs

252 Congress Street, Boston, Mass.
New Haven Office: 944 Chapel Street
Tel. Main 1684

It may be that our soldiers are being kept in Europe to enable them to collect the mail sent them during the war!

—o—

Card in a dyer and cleaner's window: "Steam Cleans, Rejuvenates, Destroys Germs." But why go to the trouble of cleaning and rejuvenating these germs if they are going to be destroyed?

—o—

A remedy for a man who says he is tired of being the "goat" would be for him to stop butting in!

G. E. T.

NOTES OF THE TRADE

Arthur J. Peterson, overseer of dyeing for the Thomas Kent Manufacturing Company, Clifton Heights, Pa., has severed his connection with that company.

The Sandoz Chemical Works, New York, have filed notice of reorganization with an active capital of $5,000 and 1,000 shares of commonn stock, no par value.

The United Dyewood Company has declared quarterly dividends of 1½ per cent on the common and 1¾ per cent on the preferred stocks, payable April 1 to holders of record March 15.

The Tar Reduction Company, Jersey City, N. J., has been incorporated, with a capital of $5,000, to manufacture dyestuffs. The incorporators are James G. Affleck, Jr., Louis A. Middlebrook and Merrill N. Gates.

Frank H. Moran has accepted the position as overseer of dyeing for the Hampshire Woolen Company, Ashuelot, N. H. Mr. Moran comes from Dexter, Me.

The Kasko Chemical Company, 25 East Twenty-first Street, Bayonne, N. J., has filed notice of organization to manufacture chemicals and dyestuffs. John Kaslikowsky heads the company.

DU PONT DYESTUFFS

The Result of Continuous Care

"One hundred ninety-one firms reported a total of 24,736 employees engaged in the manufacture of coal-tar products, 2,605, or 10.5 percent. were chemists or engineers. This is probably a larger proportion of technically trained men than will be found in any other important manufacturing industry in the U. S."—*United States Tariff Commission Report.*

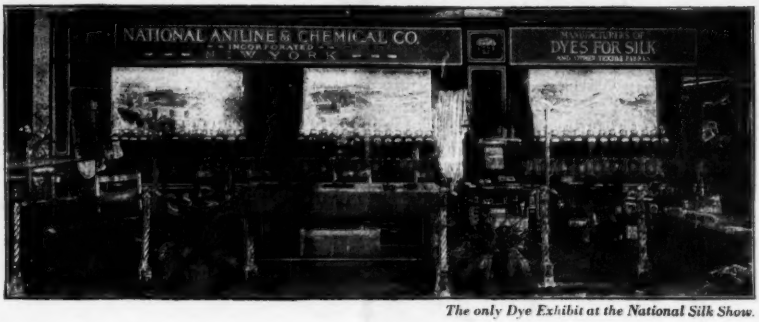
The reason for this preponderance of technicians is that each step in the intricate synthesis from the lump of coal to the brilliant dyestuffs must be under the constant observation of chemical engineers.

Coal-tar dyestuffs are the final effect of months of tedious laboratory research coupled with more months of semi-commercial experimenting and the last stage of actual plant production. Each step has its ever-watchful chemist, for the greater the care the better the dyestuff.

Du Pont Dyestuffs are what they are, because some 4,000 earnest workers labor for their excellence, and of this number 470 are chemists or technically trained men.

E. I. du Pont de Nemours & Co., Inc.
Dyestuffs Sales Department
WILMINGTON, DEL.

Branch Offices
New York Boston Providence
Philadelphia Chicago
Charlotte, N. C.



The only Dye Exhibit at the National Silk Show.

Not a "Riot of Color" but the *Organization* of Color

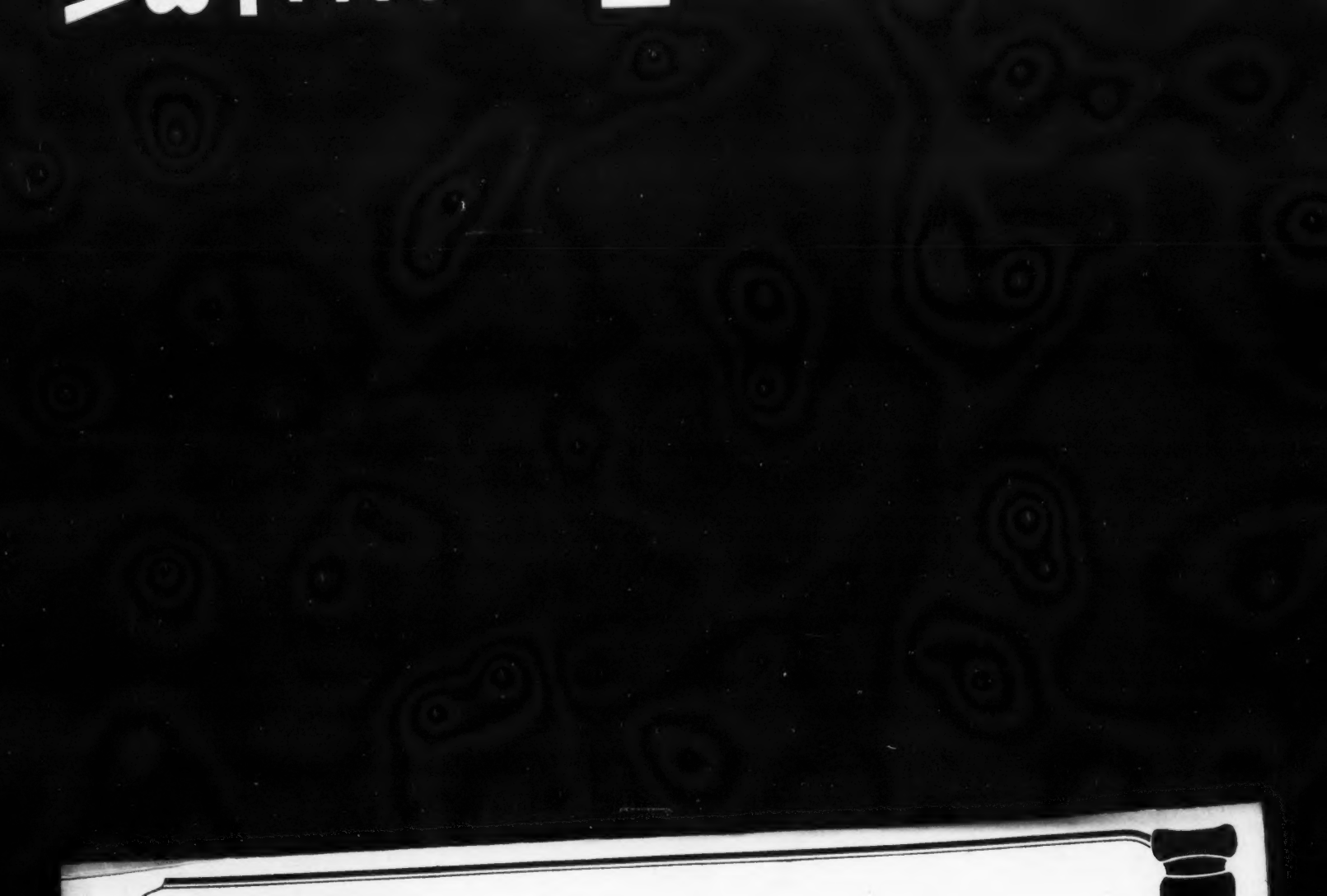
THE casual visitor to the remarkable Silk Show just held in New York, was impressed with the "riot of color." The phrase was on every lip; color was the great attractive force—as color always has been.

But it was the *organization* of color that made the displays so striking—the cunning choice of shades, the blending of tones, the studied use of harmonies and contrasts. The brilliant display was a tribute to the silk manufacturer and to the dye manufacturer alike.

It is significant that practically all the dyes used were of American manufacture, and that the majority of these were "National" dyes.

National Aniline and Chemical Co., Inc.

General Offices

21 Burling Slip *New York*

National Dyes